DIN Rail Box PC

Intel Celeron Bay Trail-M

IBDRW / IBDRW-Ex

User Manual

Version 1.0

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Chapter 1 Winmate IBDRW / IBDRW-Ex Overview

1.1 Introduction

Winmate IBDRW is a DIN-rail mounted Fanless Box PC, which provides several serial communication ports. With a compact size and small form factor as well as front accessible I/Os, Winmate IBDR is very convenient for wiring and DIN-rail installation in the control cabinet. The Wide operation temperature and Industrial serial port design makes this unit a perfect communication even in harsh and critical location. While IBDRW-Ex is ATEX and Class 1 Division 2 certified DIN Rail Box pc for hazardous location deployment and for ATEX certified Box PC requires special enclosure box.

1.2 Hardware Specification

1.2.1 System Specification

Processor	: Intel ®Celeron ® Bay Trail-M
System Chipset	: Bay Trail SoC Chipset
System Memory	: 1 x DDR3L 1333MHz SO-DIMM 2GB (max 8GB)
Ethernet Controller	: 4 x Intel ®WG82574L GbE LAN
USB	: 1 x USB 3.0
	: 3 x USB 2.0 (external)
	: 2 x USB 2.0 by pin-header (internal)
Storage	: Default 32GB mSATA SSD
Second Storage (optional)	: 2.5” SSD 64~512GB

1.2.2 Mechanical and Power

Dimensions	: 85.5mm x 152mm x 139mm (L x W x H)
Construction	: Aluminum Housing
Power Input	: 9-36V DC IN (isolation)
Power Source Range	: 20W max.
Mounting	: DIN Rail

1.2.3 I/O Connectors

Front Side I/O : 1 x Power ON/OFF button with LED indicator
1 x Line Out, Line In, Mic In
4 x RJ-45 (Giga LAN)
1 x RS232 default (422/485 as optional)
1 x VGA
1 x USB3.0,
3 x USB2.0
1 x DC Power Terminal Block
1 x RS232 default (Isolated RS232/485 as optional)
1 x 20 pins terminal block DIDO

1.2.4 Environment Considerations

Operating Temperature	: -20 to 60 deg. C
Operating Humidity	: 5% to 95% (non condensing)
Anti Vibration	: 5Hz – 500Hz / 1 Grms / 3 Axis

1.3 Packing List

- 1 x DIN Rail Mounting clip
- 1 x User Manual
- 1 x 12V AC to DC Power Adapter with power cord
- 1 x System Recovery DVD (optional)
- Terminal block female connectors
- Cable Arm Bracket (Optional for IBDR-Ex)

1.4 Safety Precaution

WARNING!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

CAUTION!

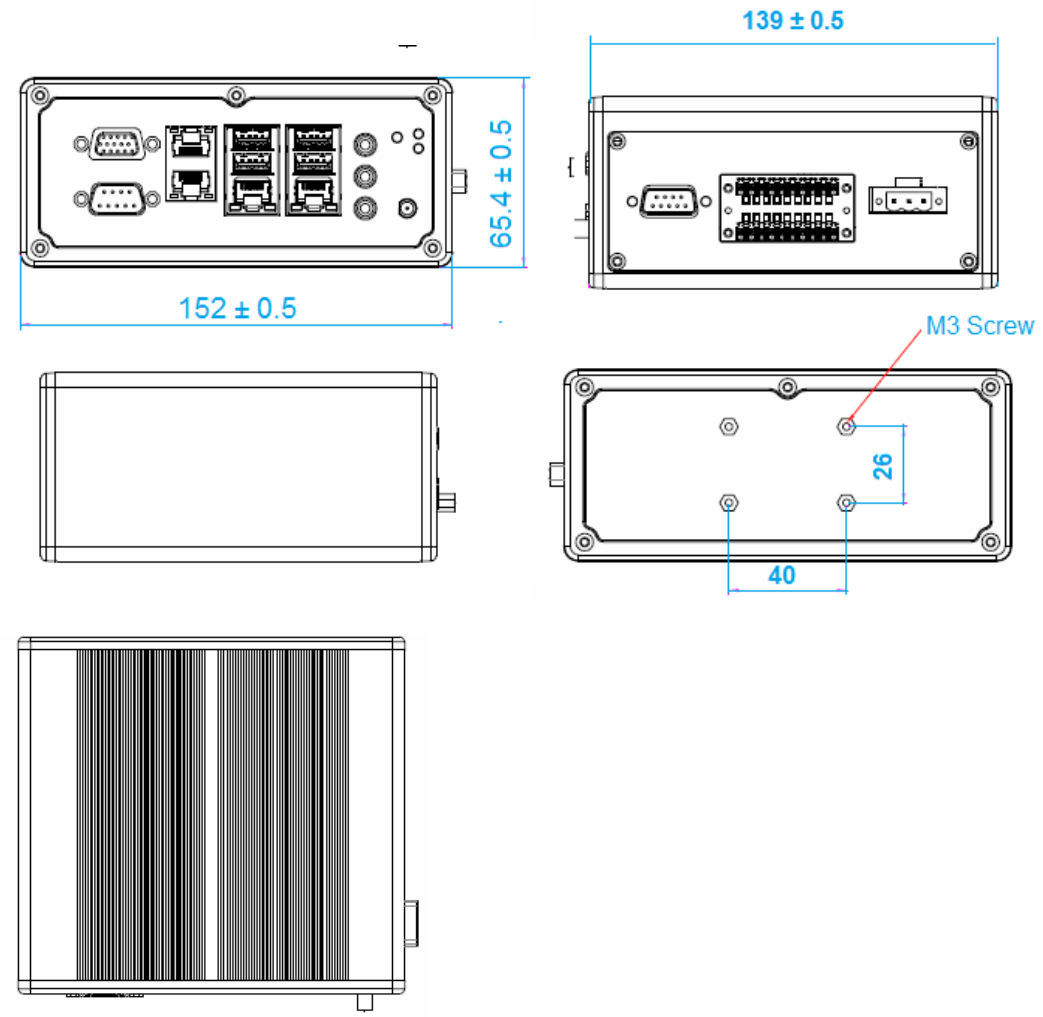
Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

SAFETY PRECAUTIONS!

- Please read this safety instruction carefully.
- Place keep this user's manual for later reference.
- Please disconnect this equipment for any AC outlet before cleaning. Use liquid or spray detergents for cleaning. Use a damp cloth.
- Do not touch the LCD panel surface with sharp or hard objects.
- For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
- Keep this equipment away from humidity.
- Place this equipment on a reliable surface during installation, dropping letting it fall could cause damage.
- The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
- Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
- Position the power cord so that people cannot step on it. Do not place anything over the power cord.
- All cautions and warnings on the equipment should be noted.
- If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
- Never pour any liquid into an opening. This could cause fire or electrical shock.
- Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
- If any of the following situations arises, get the equipment check personnel:
  - The power cord or plug is damaged
  - Liquid has penetrated into the equipment
  - The equipment has been exposed to moisture
  - The equipment does not work well, or you cannot get it to work according to user's manual
  - The equipment has been dropped and damaged
  - The equipment has obvious signs of breakage

- Do not leave this equipment in an uncontrolled environment where temperature is below -20°C (-4°F) or above 60°C (140°F). It may damage the equipment.
- **Caution –** Use recommended mounting apparatus to avoid risk of injury.
- **Warning –** Only use the connection cords which come along with the product, when in doubt, please contact the manufacturer.
- Provision shall be made to provide transient protection device to be set at a level not exceeding 140% of the rated voltage at the power supply terminals of the apparatus.
- **Warning** – Explosion Hazard – Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.
- **Warning** – The equipment should be adequately protected from direct light when installed indoor or outdoor.

1.5 Chassis Dimension



Chapter 2 Hardware Functionality

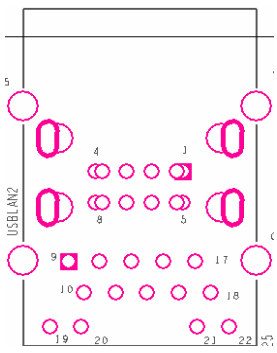
2.1 Winmate IBDRW / IBDRW-Ex Peripherals

The following figures show the connectors on Winmate IBDRW and the following sections give you detailed information about function of each peripheral.

2.1.1 DC Adapter Jack

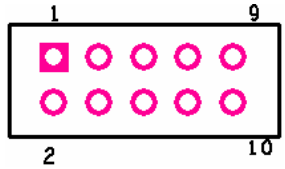
Pin	Signal Name
1	Adapter
2	GND
3	GND
4	GND
5	Adapter_DC
6	Adapter_DC

2.1.2 DC Adapter Jack



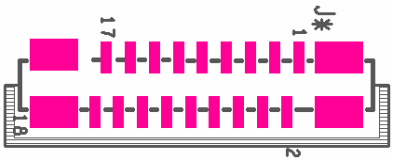
Pin	Signal Name	Pin	Signal Name
1	USB5V	12	TX2+
2	USB-	13	TX2-
3	USB+	14	TX3+
4	GND	15	TX3-
5	USB5V	16	TX4+
6	USB-	17	TX4-
7	USB+	18	DGND
8	GND	19	LEDGND
9	NA	20	YLED
10	TX1+	21	OLED
11	TX1-	22	GLED

2.1.3 Panel



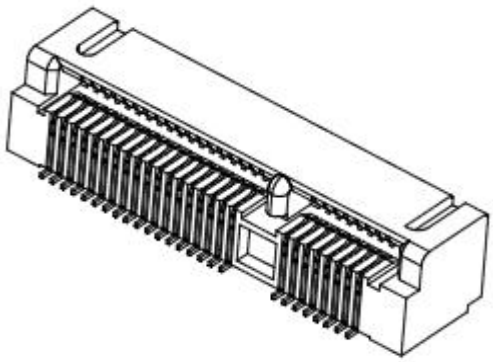
Pin	Signal Name	Pin	Signal Name
1	+V5S	6	GND
2	+V3.3S	7	GND
3	GND	8	FP_RST_N
4	SATA_LED#	9	NA
5	PWRBTN#	10	+V5A

2.1.4 DVI Connector

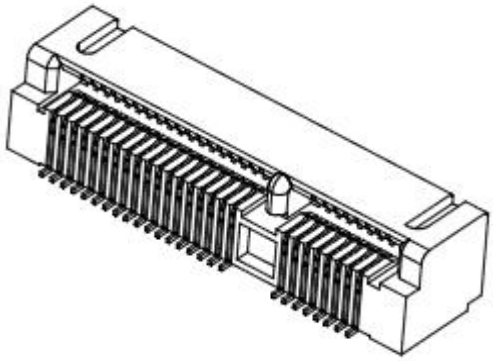


Pin	Signal Name	Pin	Signal Name
1	GND	10	GND
2	HDMIB_TMDS0-	11	HDMIB_TMDS2 -
3	HDMIB_TMDS0+	12	HDMIB_TMDS2 +
4	GND	13	GND
5	HDMI_DDC_CLK	14	HDMIB_CLK +
6	HDMI_DDC_DATA	15	HDMIB_CLK -
7	GND	16	HDMI_HPD1
8	HDMIB_TMDS1-	17	+V5S
9	HDMIB_TMDS1+	18	+V5S

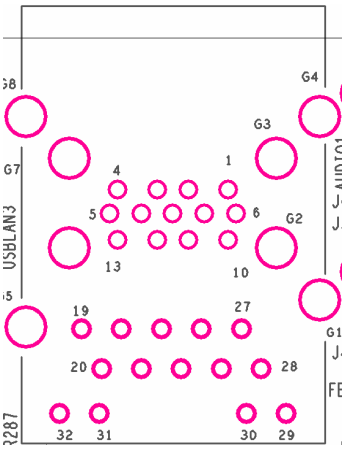
2.1.5 Mini PCIe



2.1.6 SSD

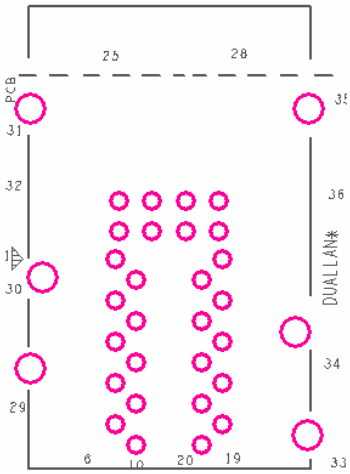


2.1.7 USB 2.0 + USB 3.0 + LAN Connector



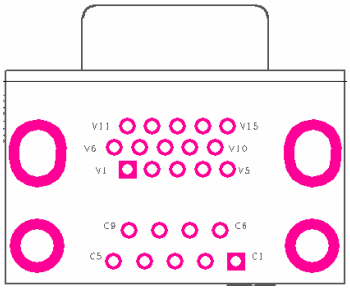
Pin	Signal Name	Pin	Signal Name
1	+5VUSB3.0	20	LAN1_MDI0_IN+
2	U2DN0	21	LAN1_MDI0_IN-
3	U2DP0	22	LAN1_MDI1_IN+
4	UGND	23	LAN1_MDI1_IN-
5	U3RXDN1	24	LAN1_MDI2_IN+
6	U3RXDP1	25	LAN1_MDI2_IN-
7	UGND	26	LAN1_MDI3_IN+
8	U3TXDN1	27	LAN1_MDI3_IN-
9	U3TXDP1	28	LAN1_DGND
10	+5VUSB3.0	29	LAN1_VDD33
11	U2DN1	30	LAN1_ACTIVE_Y
12	U2DP1	31	LAN1_1000_O
13	UGND	32	LAN1_100_10_G
19	N89607501		

2.1.8 Dual LAN



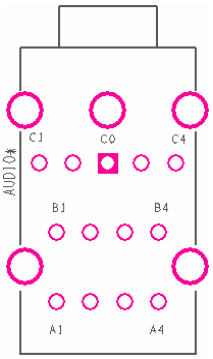
Pin	Signal Name	Pin	Signal Name
1	LAN3_MDI0_IN+	19	NA
2	LAN3_MDI0_IN-	20	GND
3	LAN3_MDI1_IN+	21	LAN3_100_10_G
4	LAN3_MDI1_IN-	22	LAN3_1000_O
5	LAN3_MDI2_IN+	23	LAN3_ACTIVE_Y
6	LAN3_MDI2_IN-	24	LAN3_VDD33
7	LAN3_MDI3_IN+	25	LAN4_100_10_G
8	LAN3_MDI3_IN-	26	LAN4_1000_O
9	NA	27	LAN4_ACTIVE_Y
10	GND	28	LAN4_VDD33
11	LAN4_MDI0_IN+	29	LAN_GND
12	LAN4_MDI0_IN-	30	LAN_GND
13	LAN4_MDI1_IN+	31	LAN_GND
14	LAN4_MDI1_IN-	32	NA
15	LAN4_MDI2_IN+	33	LAN_GND
16	LAN4_MDI2_IN-	34	LAN_GND
17	LAN4_MDI3_IN+	35	LAN_GND
18	LAN4_MDI3_IN-	36	NA

2.1.9 COM + VGA



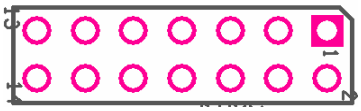
Pin	Signal Name	Pin	Signal Name
C1	DCD4/485TXRX-	V1	R_FILTER
C2	SRD4/485TXRX+	V2	G_FILTER
C3	STD4/422RX+	V3	B_FILTER
C4	DTR4/422RX-	V4	NA
C5	GND	V5	GND
C6	NDSR1	V6	GND
C7	NRTS1	V7	GND
C8	NCTS1	V8	GND
C9	NRI1	V9	VGA_5V
		V10	GND

2.1.10 Audio



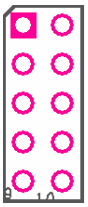
Pin	Signal Name	Pin	Signal Name
A1	Line1_L	C1	MIC1_L
A2	SW_C	C2	SW_B
A3	AUGND	C3	AUGND
A4	LINE1_R	C4	MIC1_R
B1	AZ_FOUT_L	G1	AUGND
B2	LINE2_JD	G2	AUGND
B3	AUGND	G3	AUGND
B4	AZ_FOUT_R	G4	AUGND
C0	AUGND	A1	LINE1_L
		A2	SW_C

2.1.11 DIDO



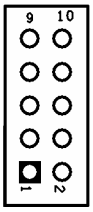
Pin	Signal Name	Pin	Signal Name
1	GND	8	DINT1
2	DIO_5V	9	DINT2
3	DOUT3	10	DINT0
4	DOUT1	11	GPIO53_IN0
5	DOUT2	12	GPIO56_OUT0
6	DOUT0	13	GPIO54_IN1
7	DINT3	14	GPIO57_OUT1

2.1.12 RS422, RS485



Pin	Signal Name	Pin	Signal Name
1	GND	8	DINT1
2	DIO_5V	9	DINT2
3	DOUT3	10	DINT0
4	DOUT1	11	GPIO53_IN0
5	DOUT2	12	GPIO56_OUT0

2.1.13 Isolator DIDO (CON4)



Pin	Signal Name	Pin	Signal Name
1	ISO5V	6	DO2_GPIO
2	ISOGND	7	DI3_GPIO
3	DI1_GPIO	8	DO3_GPIO
4	DO1_GPIO	9	DI4_GPIO
5	DI2_GPIO	10	DO4_GPIO

2.1.14 Clear CMOS

1-2 : Clear CMOS
2-3 : Normal

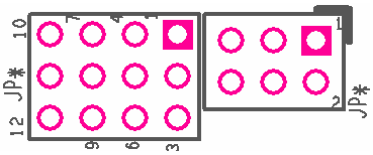
2.1.15 RS422, RS485 Terminal Resistor

1-2 : 120 ohm

2.1.16 RS422, RS485

1-2 : RS485
2-3 : RS422

2.1.17 RS232, RS422, RS485



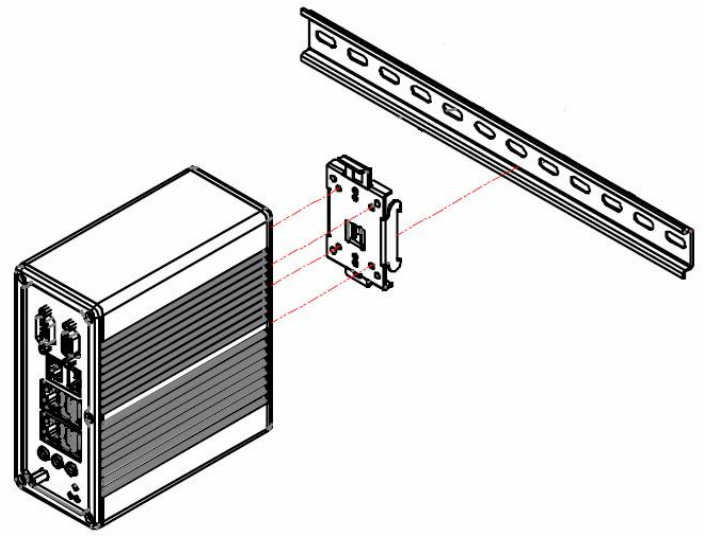
Jumper	RS232	RS422	RS485
JP8 (2x3)	1-2	3-4	5-6
JP9 (3x4)	1-2	2-3	2-3
	4-5	5-6	5-6
	7-8	8-9	8-9
	10-11	11-12	11-12

Chapter 3 Initial Setup

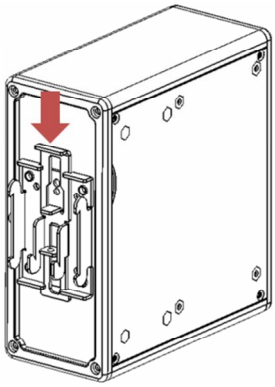
3.1 DIN Rail Mounting Setup

Please follow these steps to mount the IBDRW hook kit on a DIN rail

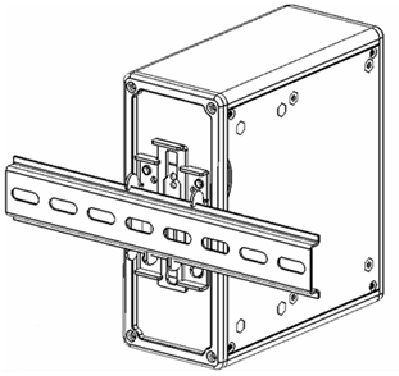
1. Screw the provided DIN-rail Kit on the rear side of the box as the diagram shown below.
2. Please make sure the stiff metal handle part is located on the top



3. Press the stiff metal handle downward and insert the hook into the DIN-rail

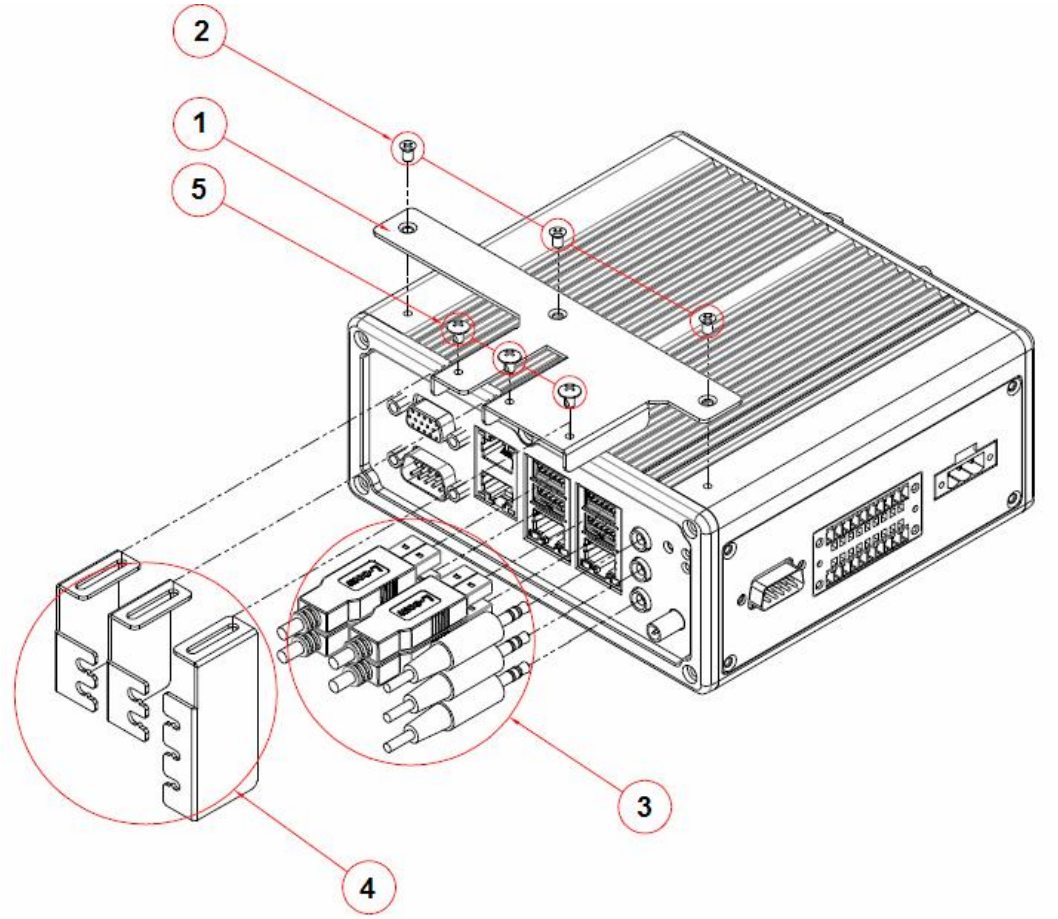


4. Release the handle so it can snap into place as shown below



3.2 Cable ARM Bracket Installation (optional for IBDR-Ex)

In hazardous locations, sparks caused by the movement from a cable and connector which is even slightly loose could lead to a disaster and to prevent this, cable arm bracket can be use to secure some LAN, USB and Audio connectors. Follow these steps to complete the installation



1. Find the cable arm bracket in the package, including the plate, bracket / holder, and screws
2. Install the plate on the top of the box and screw it tightly
3. Plug all the necessary cables into the connectors
4. Place the cable arm bracket according to the picture and then attach the bracket / holders to the plate and then screw it for securing the installed cables

Note For ATEX deployment, it is require to have Enclosure box

3.3 Configuration of the BIOS

3.3.1 BIOS setup and Boot Procedure

BIOS stands for “Basic Input Output System” and it is the most basic communication between user and the hardware. To enter BIOS Setup, the [DEL] key must be pressed after the USB controller has been initialized as soon as the following message appears on the monitor during Power On Self Test (POST):

“Press DEL to run SETUP”

Note : Update BIOS version may be published after the manual is released. Please check with the latest version of BIOS on the website. User may need to run BIOS setup utility for the following status:

1. Error message on screen indicate to check BIOS Setup
2. Restoring the Factory default setting
3. Modifing the specific hardware specification
4. Want to optimize the specification

3.3.2 BIOS Setup Keys

The following keys are enabled during POST:

Key	Function
Del	Enters the BIOS setup menu
F7	Display the boot menu. Lists all bootable devices that are connected to the system. With cursor ↑ and cursor ↓ and by pressing <ENTER>, select the device used for the boot
Pause	Pressing the [Pause] key stops the POST. Press any other key to resume the POST.

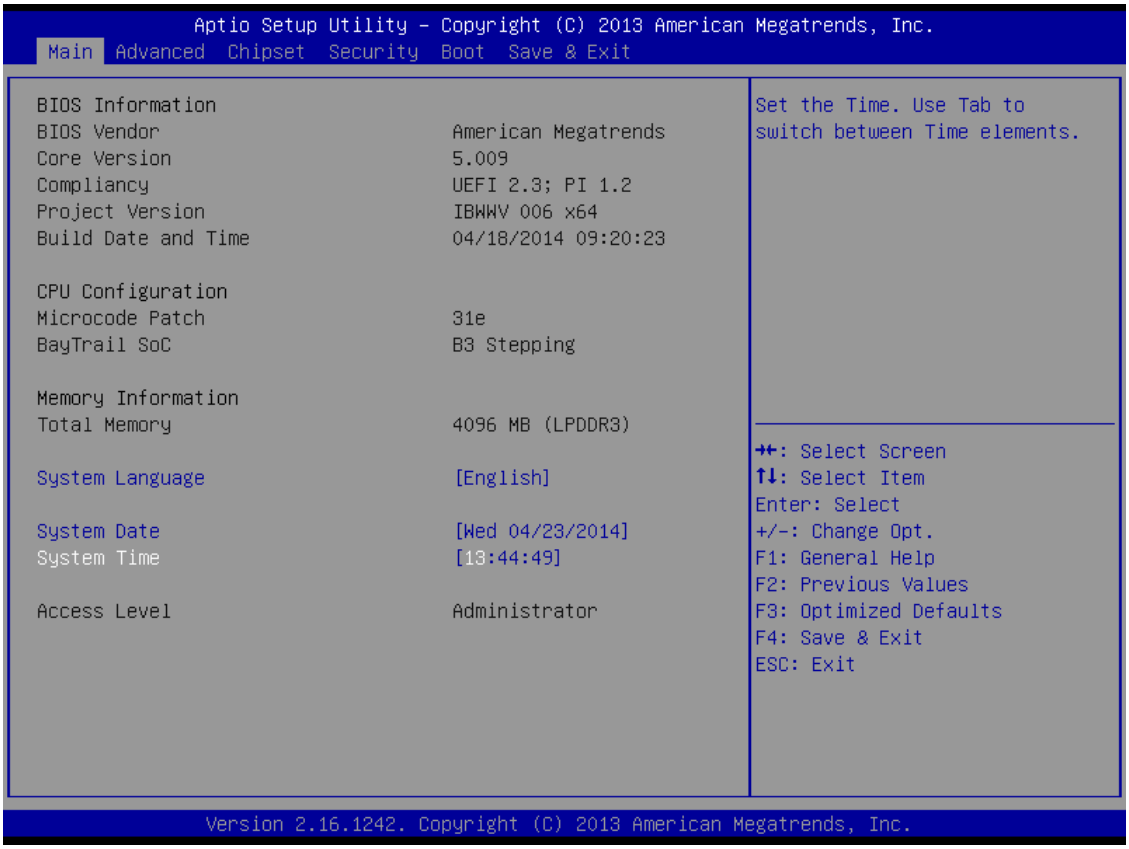
The following keys can be used after entering the BIOS Setup:

Key	Function
F1	General Help
F2	Previous Values

F3	Optimized Defaults
F4	Save & Exit
Esc	Exit
+/-	Change Opt.
Enter	Select or execute command
Cursor ↑	Moves to the previous item
Cursor ↓	Goes to the next item
Cursor ←	Moves to the previous item
Cursor →	Goes to the next item

3.3.3 MAIN

Immediately after the [DEL] key is pressed during startup, the main BIOS setup menu appears:

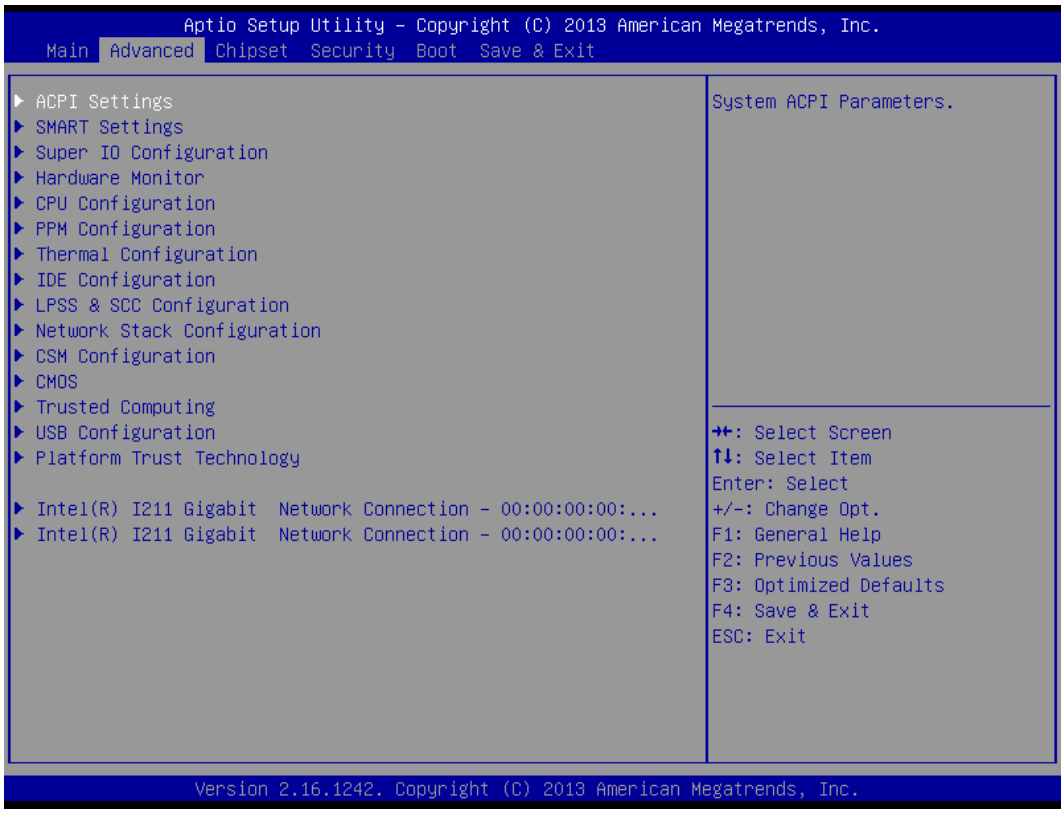

Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
BIOS Information
BIOS Vendor American Megatrends
Core Version 5.009
Compliancy UEFI 2.3; PI 1.2
Project Version IBWWV 006 x64
Build Date and Time 04/18/2014 09:20:23
CPU Configuration
Microcode Patch 31e
BayTrail SoC B3 Stepping
Memory Information
Total Memory 4096 MB (LPDDR3)
System Language [English]
System Date [Wed 04/23/2014]
System Time [13:44:49]
Access Level Administrator
Set the Time. Use Tab to switch between Time elements.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

BIOS setting	Description	Setting options	Effect
System Time	This is current time setting. The time is maintained by the battery when the device is turned off	Adjustment of the time	Set the time in the format [hh:mm:ss]
System Date	This is current date setting. The time is maintained by the battery when the device is turned off	Changes to the date	Set the date in the format [mm/dd/yyyy]
System Language	This is current language setting.	Adjustment of the language	Set the language in other language. The language in this device is English

3.3.4 BIOS Advance Setup Utility

BIOS Setting	Description
Intel AMT Support	Enable and disable BIOS support for Intel Active Management Technology
Intel AMT Setup Prompt	Enable and disable the boot interruption <Ctrl+P> to call up Intel Management Engine BIOS Extention (MBEx) configuration page
AMT CIRA Request Trig	Enable Client Initiated Remote Access (CIRA) Fast Call for Help. CIRA allows AMT maintenance event if the AMT PC is not in the intranet
AMT CIRA Timeout	CIRA timeout for connection establishment with MPS (Manageability Presence Server / “vPro Enabled Gateway”)
Un-Configure ME	Resets all the values of the MEBx to their defaults (see section “Reset with Un-Configure”)
USB Configure	USB Configure: Enable and disable the USB configuration (provisioning)

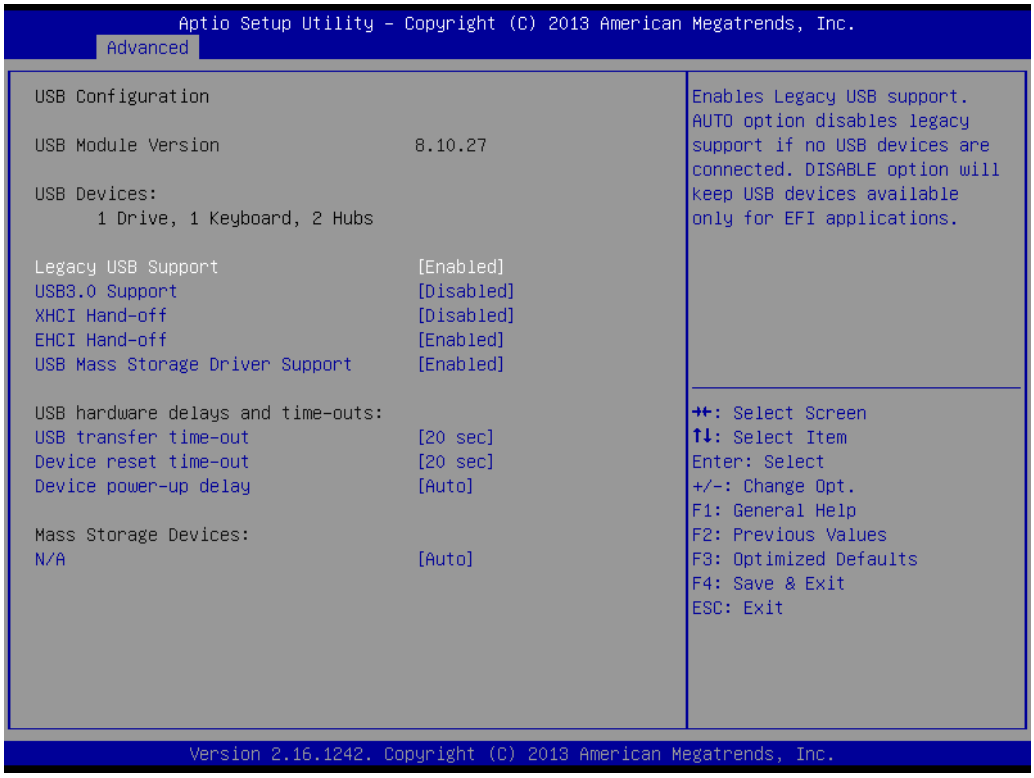
3.3.5 Advanced



BIOS Setting	Description	Setting options	Effect
ACPI Settings	Configures ACPI settings	Enter	Opens submenu
SMART Settings	Configures SMART settings	Enter	Opens submenu
Super IO Configuration	Configures System Super IO Chip parameters	Enter	Opens submenu
Hardware Monitor	Monitor hardware status	Enter	Opens submenu
CPU Configuration	Configures CPU settings	Enter	Opens submenu
PPM Configuration	Configures PPM Parameters	Enter	Opens submenu
Thermal Configuration	Configures Thermal Parameters	Enter	Opens submenu
IDE Configuration	Configures IDE devices	Enter	Opens submenu

LPSS & SCC Configuration	Configures LPSS & SCC	Enter	Opens submenu
Network Stack Configuration	Configures network stack	Enter	Opens submenu
CSM Configuration	Configures CSM: Enable/Disable, Option ROM execution settings, etc.	Enter	Opens submenu
CMOS	CMOS settings / Information	Enter	Opens submenu
Trusting Computing	Trusted computing settings	Enter	Opens submenu
USB Configuration	Configures USB settings	Enter	Opens submenu
Platform Trust Technology	Platform trust technology	Enter	Opens submenu

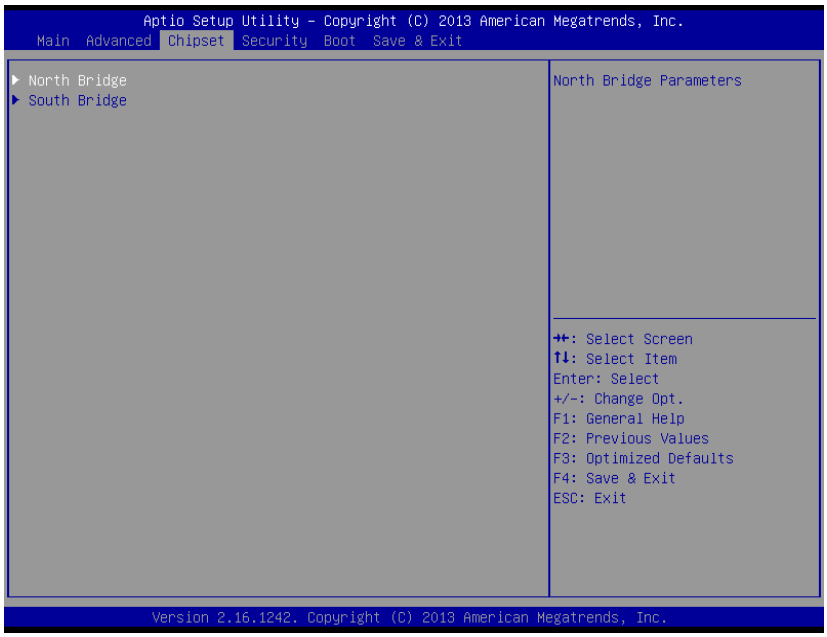
3.3.6 USB Configuration


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Advanced
USB Configuration
USB Module Version 8.10.27
USB Devices:
1 Drive, 1 Keyboard, 2 Hubs
Legacy USB Support [Enabled]
USB3.0 Support [Disabled]
XHCI Hand-off [Disabled]
EHCI Hand-off [Enabled]
USB Mass Storage Driver Support [Enabled]
USB hardware delays and time-outs:
USB transfer time-out [20 sec]
Device reset time-out [20 sec]
Device power-up delay [Auto]
Mass Storage Devices:
N/A [Auto]
Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

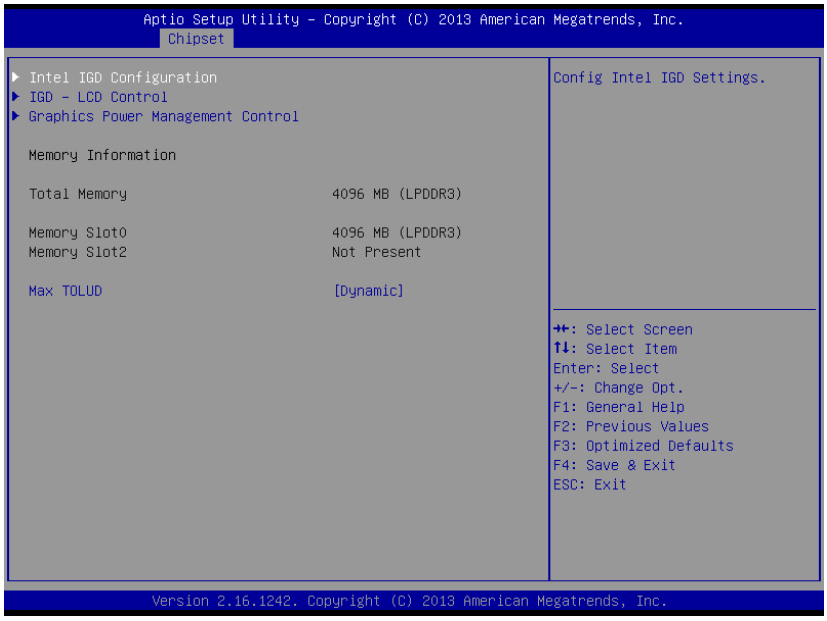
BIOS Setting	Description	Setting options	Effect
Legacy USB	User can enable or Disable		will keep USB devices

Support	disable USB port		available only for EFI applications
		Enable	Enable all the USB devices
USB 3.0 Support	User can enable or disable USB 3.0 (XHCI) controller support.	Enable	USB 3.0 is enable
		Disable	USB 3.0 is disable
XHCI Hand-off	This is a workaround for OSes without XHCI hand-off support	Disable	Disables this function
		Enable	Enables this function
EHCI Hand-off	This is a workaround for OSes without ECHI hand-off support	Disable	Disables this function
		Enable	Enables this function
USB mass storage driver support	User can Enable or disable USB mass storage driver support	Disable	Disables this function
		Enable	Enables this function
USB Transfer time-out	The time-out value for control, bulk, and interrupt transfers	1 Sec 5 Sec 10 Sec 20 Sec	Depends on the time-out value
Device Reset time-out	USB mass storage device start unit command time-out	10 Sec 20 Sec 30 Sec 40 Sec	Depends on the time-out value
Device power-up delay	Maximum time the device will take before it properly reports itself to the host controller	Auto	Uses default value: for a root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor

3.3.7 Chipset



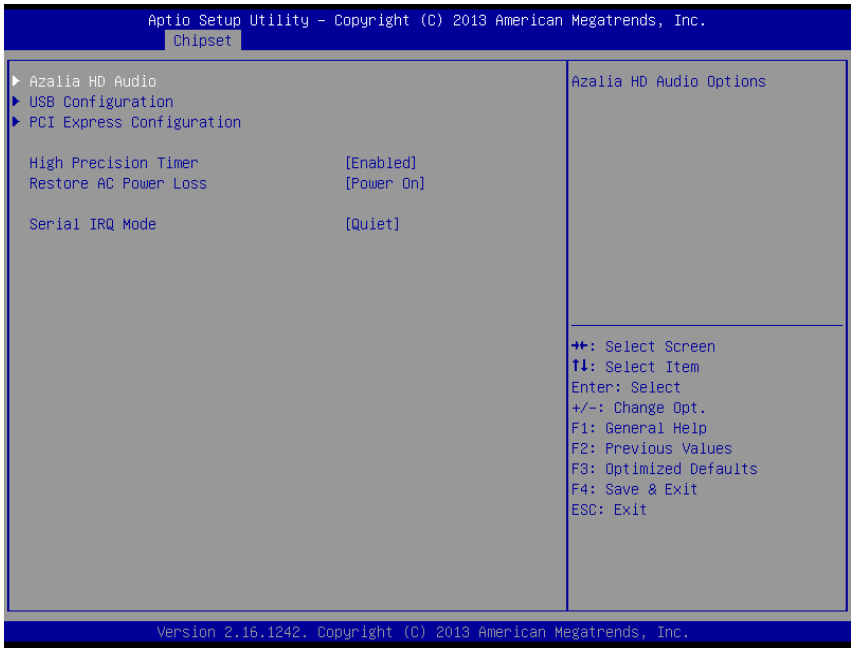
3.3.8 Chipset North Bridge Parameters



BIOS Setting	Description	Setting options	Effect
Intel IGD Configuration	Provides onboard graphics-related	Enter	Opens submenu

	configuration options		
IGD – LCD Control	Configures IGD – LCD setting	Enter	Opens submenu
Graphic Power Management Control	Provides power saving configuration options for the onboard graphics	Enter	Opens submenu

3.3.9 Chipset South Bridge Parameters

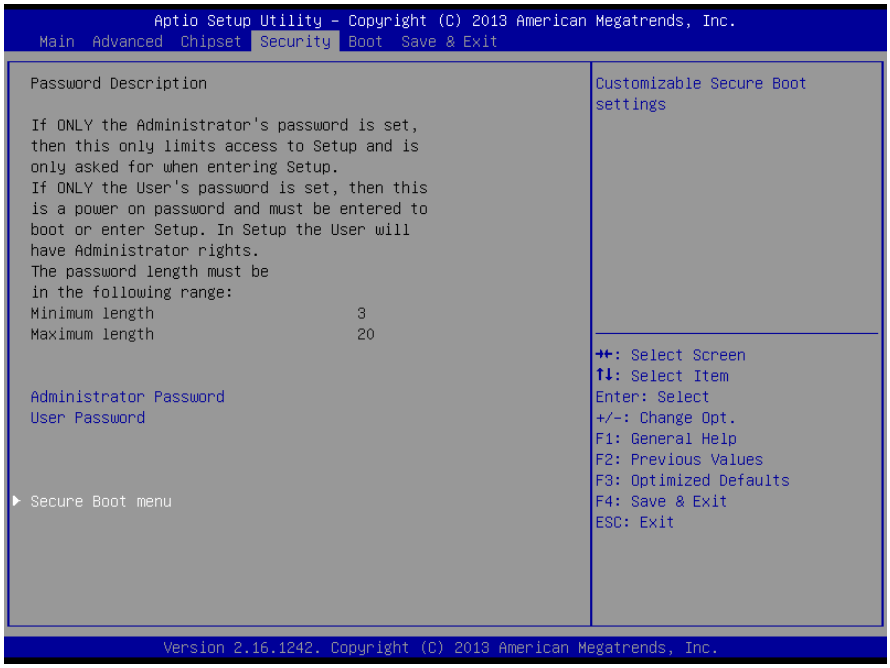


BIOS Setting	Description	Setting options	Effect
Azalia HD Audio	Configures onboard audio function	Disable	Disables this function
		Enable	Enables this function
USB Configuration	Provides user with configuration options for the USB controller, such as enabling/disabling a specific USB port and support for certain features	USB 2.0(EHCI)	Enable / Disable this function
		USB Port 0	Enable / Disable this function
		USB Port 1	Enable / Disable this function
		USB Port 2	Enable / Disable this function

		USB Port 3	Enable / Disable this function
PCI Express Configuration	Provides user with configuration options for the PCI Express bus, such as enabling/disabling a specific PCI Express channel and speed configuration	PCI Express port 0	Enable / Disable this function
		PCI Express port 1	Enable / Disable this function
		PCI Express port 2	Enable / Disable this function
		PCI Express port 3	Enable / Disable this function
High Precision Timer	Configures high precision timer (HPET) in the operating system	Disable	Disables this function
		Enable	Enables this function
Restore AC Power Loss	Configures the state of the system after return of power on AC power loss	Power Off	The System stays off upon the return of the AC power
		Power On	The System is turned on upon the return of the AC power
		Last State	The system returns to its last known awake state upon the return of the AC power
Serial IRQ Mode	Configures IRQ mode	Quite	Entering quite (active) mode
		Continuous	Entering Continuous (idle) mode

3.3.10 Security

Allows user to configure an administration or user password, user must enter the administrator or user password at system startup and when entering BIOS setup


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Password Description
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup.
If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights.
The password length must be in the following range:
Minimum length 3
Maximum length 20
Administrator Password
User Password
Secure Boot menu
Customizable Secure Boot settings
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
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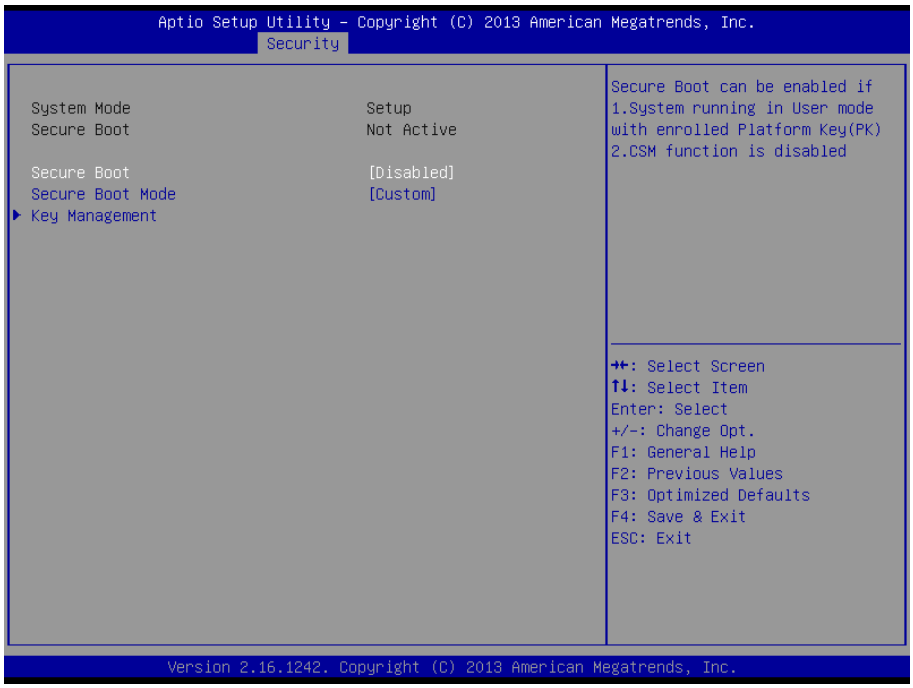
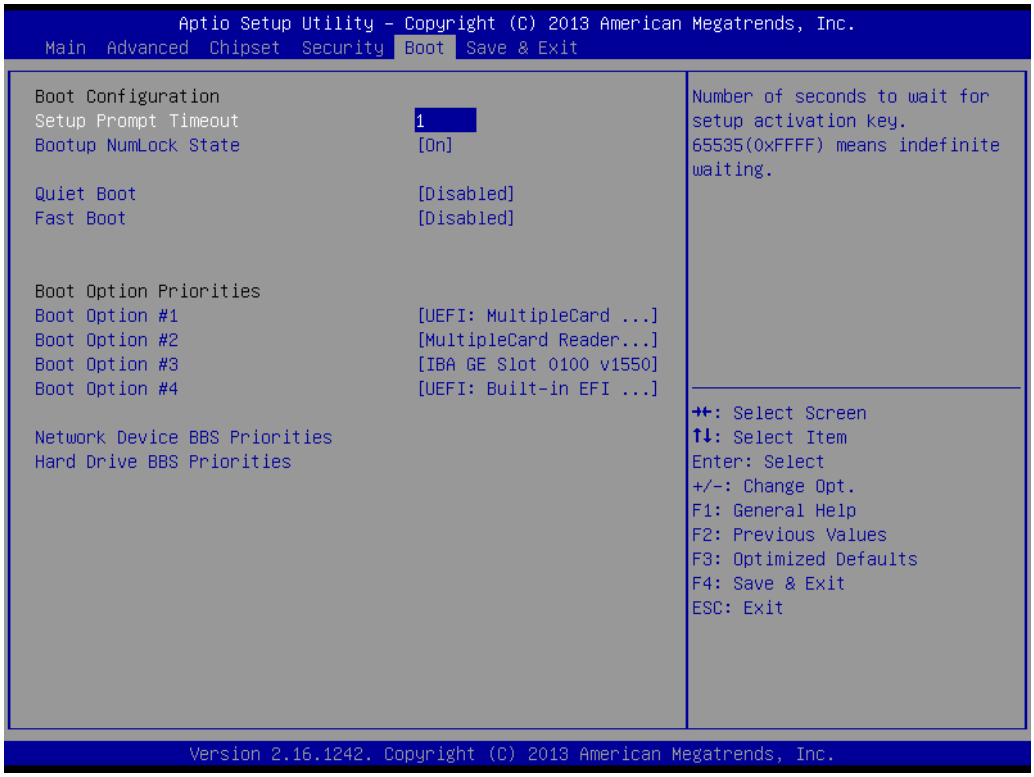
BIOS Setting	Description	Setting options	Effect
Administrator Password	Displays whether or not an administrator password has been set	Enter	Enter Password
User Password	Display whether or not a user password has been set	Enter	Enter Password

3.3.11 Security Boot Menu



BIOS Setting	Description	Setting options	Effect
Secure Boot	Displays the current boot state	Disable	Disables this function
		Enable	Enables this function
Secure Boot Mode	Allows user to configure the secure boot mode	Disable	Disables this function
		Enable	Enables this function
Key Management	Provides user with configuration options for secure boot key management	Enroll all factory default keys, Platform key, key exchange key, Authorized signatures, Authorized timestamps, Forbidden signatures	Select the desired key

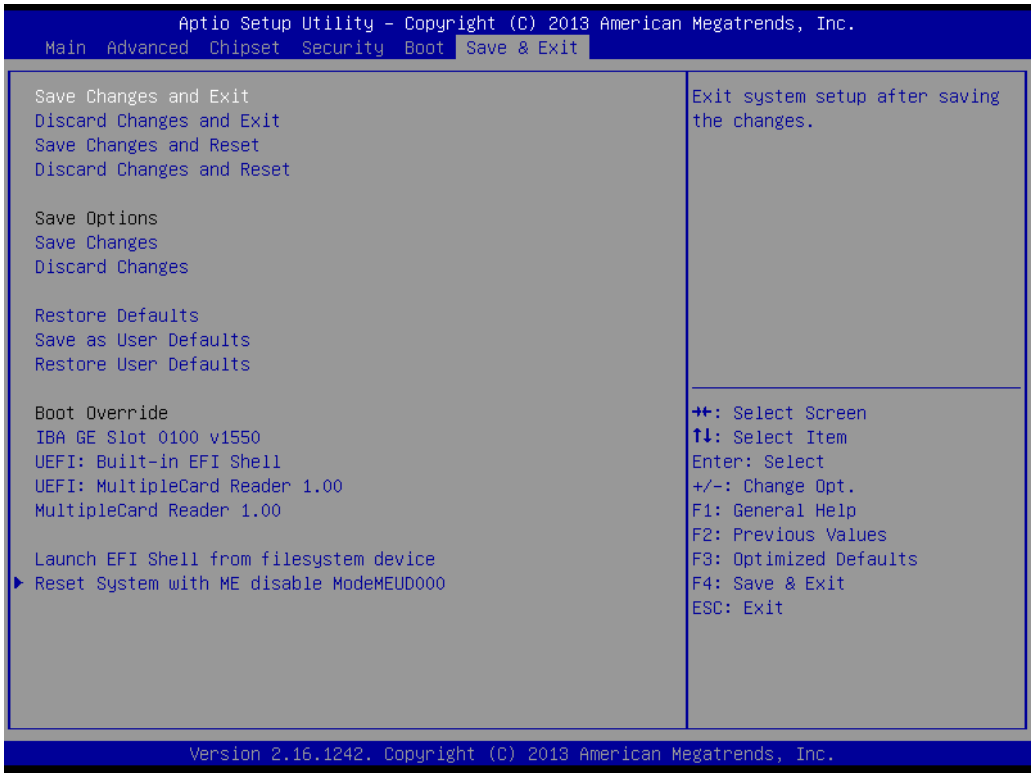
3.3.12 Boot


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Boot Configuration
Setup Prompt Timeout 1
Bootup NumLock State [On]
Quiet Boot [Disabled]
Fast Boot [Disabled]
Boot Option Priorities
Boot Option #1 [UEFI: MultipleCard ...]
Boot Option #2 [MultipleCard Reader...]
Boot Option #3 [IBA GE Slot 0100 v1550]
Boot Option #4 [UEFI: Built-in EFI ...]
Network Device BBS Priorities
Hard Drive BBS Priorities
Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

BIOS Setting	Description	Setting options	Effect
Setup Prompt Timeout	Allows user to configure the number of seconds to stay in BIOS setup prompt screen	Enter	Set the prompt timeout
Boot NumLock State	Enables or disables Numlock feature on the numeric keypad of the keyboard after the POST. (Default: On)	On	Remains On
		Off	Remains Off
Quite Boot	Determines if POST message or OEM logo (default = Black background) is displayed	Disabled	Disables this function
		Enabled	Enables this function
Fast Boot	Enables or disables Fast Boot to shorten the OS boot process. (Default: Disabled)	Disable	Disables this function
		Enable	Enables this function

Boot Option Priority	Specifies the overall boot order from the available devices	Ex: Boot Option#1 (hard drive)	Hard drive as the first priority
Hard Drive BBS Priority	Specifies the boot order for a specific device type, such as hard drives, optical drives, floppy disk drives, and devices that support Boot from LAN function	Enter	Enter the submenu that present the devices of the same type are connected

3.3.13 Save & Exit


Aptio Setup Utility – Copyright (C) 2013 American Megatrends, Inc.
Main Advanced Chipset Security Boot Save & Exit
Save Changes and Exit
Discard Changes and Exit
Save Changes and Reset
Discard Changes and Reset
Save Options
Save Changes
Discard Changes
Restore Defaults
Save as User Defaults
Restore User Defaults
Boot Override
IBA GE Slot 0100 v1550
UEFI: Built-in EFI Shell
UEFI: MultipleCard Reader 1.00
MultipleCard Reader 1.00
Launch EFI Shell from filesystem device
Reset System with ME disable ModeMEUD000
Exit system setup after saving the changes.
→←: Select Screen
↑↓: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit
Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.

BIOS Setting	Description	Setting options	Effect
Save Changes and Exit	This saves the changes to the CMOS and exits the BIOS Setup program	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Discard Changes and Exit	This exits the BIOS Setup without saving the changes	Enter <Yes>	Saves the changes

	made in BIOS Setup to the CMOS	Esc <No>	Return to the BIOS Setup Main Menu
Save Changes and Reset	Reset the system after saving the changes	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Discard Changes and Reset	Reset system setup without saving any changes	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Save Changes	Save changes done so far to any of the setup options	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Discard Changes	Discard changes done so far to any of the setup options	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Restore Default	Restore/load default values for all the setup options	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Save as User Defaults	Save the changes done so far as User defaults	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu
Restore User Defaults	Restore the User Defaults to all the setup options	Enter <Yes>	Saves the changes
		Esc <No>	Return to the BIOS Setup Main Menu

APPENDIX

Refer the following descriptions for various approvals and certifications

N.A. Safety for Information Technology Equipment **(optional for IBDRW-Ex)**

Certification by Underwriter Laboratories to UL60950-1, 2nd Edition standard and equivalent CSA C22.2 No 60950-1-07, 2nd Edition Standard

N.A. Safety for HazLoc Class 1 Division 2, Groups A,B,C,D,T4 **(optional for IBDRW-Ex)**

I.T.E. FOR USE IN HAZ.LOC.
E361897

Certification by Underwriter Laboratories to ANSI/ISA-12.12.01-2012 standard and equivalent CAN/CSA C22.2 No 213-M1987 Standard

Explosive Atmosphere Directive **(optional for IBDRW-Ex)**

Certification with ATEX Directive 94/9/EC; Independent 3rd party assessment

Low Voltage Directive European Safety for Industrial Control Equipment

Self-Declaration in accordance with European LVD Directive 2006/95/EC; Independent 3rd party assessment (Accredited by IEC 17025)

Electromagnetic Compatibility Directive European EMC for Industrial Control Equipment

Self-Declaration in accordance with EMC Directive 2004/108/EC; Independent 3rd party assessment (Accredited by IEC 17025)

Federal Communications Commission on electromagnetic interference

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may cause harmful and (2) this device must accept any interference received, including that may cause undesired operation